AMENDMENTS TO THE CLAIMS

1.-25. (Cancel)

26. (Currently Amended) A ~~Method~~ method of enhancing in an individual an immune response generated by a nucleic acid vaccine, said method comprising administering a compound which is an imidazoquinoline amine, imidazopyridine amine, 6,7-fused cycloalkylimidazopyridine amine, 1,2-bridged imidazoquinoline amine, thiazolo- or oxazolo-quinolinamine or pyridinamine, imidazonaphthyridine or tetrahydroimidazonaphthyridine amine, wherein the compound is administered topically or transdermally to the individual 12 to 36 hours after the nucleic acid vaccine is administered, and wherein the nucleic acid vaccine comprises a nucleotide sequence that encodes an HIV-1 gag protein or fragment containing a gag epitope thereof and a second HIV antigen or a fragment encoding an epitope of said second HIV antigen, operably linked to a heterologous promoter.

27. (Cancel)

28. (New) The method of claim 26, wherein the compound is imidazoquinoline amine.

29. (New) The method of claim 26, wherein the compound is imiquimod or resiquimod.

30. (New) The method of claim 26, wherein the nucleic acid vaccine is administered topically or transdermally.

31. (New) The method of claim 26, wherein the nucleic acid vaccine is administered in the form of particles.

32. (New) The method of claim 26, wherein the compound is administered in the form of particles.

33. (New) The method of claim 26, wherein the nucleic acid vaccine or compound is coated on a core carrier.

34. (New) The method of claim 31, wherein the nucleic acid vaccine or compound is administered using a needleless syringe.

35. (New) The method of claim 26, wherein the compound is administered in the form of a cream.

36. (New) The method of claim 26, wherein the administration of the nucleic acid vaccine is repeated to provide a primer and booster administration.

37. (New) The method of claim 26, wherein the second antigen is selected from the group consisting of Nef, RT, and a fragment containing an epitope of Nef or RT.

38. (New) The method of claim 26, wherein the gag protein comprises p17.

39. (New) The method of claim 38, wherein the gag protein additionally comprises p24.

40. (New) The method of claim 26, wherein the gag sequence is codon optimized to resemble the codon usage in a highly expressed human gene.

41. (New) The method of claim 37, wherein the RT sequence or fragment thereof is codon optimized to resemble a highly expressed human gene.

42. (New) The method of claim 26, wherein the nucleotide sequence encodes a Nef protein or epitope thereof.

43. (New) The method of claim 26, wherein the nucleotide sequence is selected from the group consisting of:

Gag (p17,p24) Nef truncate,

Gag (p17,p24) (codon optimized)Nef(truncate),

Gag (p17,p24)RT Nef (truncate),

Gag (p17,p24)codon optimized RT Nef (truncate), and

Gag (p17,p24) codon optimized RT codon optimized Nef truncate.

44. (New) The method of claim 26, wherein the heterologous promoter is the minimal promoter from HCMV IE gene.

45. (New) The method of claim 26, wherein the 5' of the promoter comprises exon 1.

46. (New) The method of claim 26, wherein the nucleic acid sequence is in the form of a double stranded DNA plasmid.

47. (New) The method of claim 26, wherein the nucleic acid sequence encodes Gag (or a fragment thereof which comprises an epitope) and RT (or a fragment thereof which comprises an epitope) and Nef (or a fragment thereof which comprises an epitope) in any order.

48. (New) The method of claim 47, wherein the nucleic acid encodes the proteins, or fragments thereof, in the sequence Nef-RT-Gag, RT-Nef-Gag or RT-Gag-Nef.

49. (New) The method of claim 26, wherein at least one of the proteins which is encoded by the nucleic acid is a fusion protein.